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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,275	09/26/2003	Mutsumi Kimura	117115	7838

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

NGUYEN, THANH T

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/670,275

Applicant(s)

KIMURA, MUTSUMI

Examiner

Thanh T. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 9/26/03; 2/9/04.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8, drawn to a method of manufacturing an electro-optical device, classified in class 438, subclass 149.
- II. Claims 8-13, drawn to a transferred chip, classified in class 257, subclass 288.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the product can be formed by materially different process.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Joel S. Amstrong on 9/9/04 a provisional election was made with traverse to prosecute the invention of group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119

(a)-(d).

Information Disclosure Statement

The information disclosure statement filed on 9/26/03; 2/9/04 has been considered.

Oath/Declaration

Oath/Declaration filed on 9/2/04 has been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the chip" in line 7. There is insufficient antecedent basis for this limitation in the claim.

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It is suggested to change “forming the chip on the substrate, as a chip to be transferred to each basic pixel” to “forming a chip on the substrate, as the chip to be transferred to each basic pixel”.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwafuchi et al (U.S. Patent Publication No. 2002/0096994A1).

Referring to figures 1-12, Iwafuchi et al. teaches a method of manufacturing an electro-optical device including a display region in which a plurality of basic pixels (see paragraph# 142) are arranged, each basic pixel including a plurality of color pixels (see paragraph# 154), the method comprising:

forming the lines on a first substrate (80, board with LED/pixel) to drive a plurality of electro-optical elements respectively constituting the color pixels, correspondingly to the arrangement of the basic pixels (see figure 1, 12, paragraphs# 154, 182);

forming the chip on a second substrate (51), as a chip to be transferred to each basic pixel, a drive circuit to drive the plurality of electro-optical elements which constitutes the

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plurality of color pixels of each basic pixel to obtain a plurality of basic-pixel driving-chips (see figure 5, paragraph# 157, 167, 217, chip is LED); and

transferring the respective basic-pixel driving-chips (see paragraph# 217) from the second substrate onto the first substrate, and connecting the drive circuits to regions of the lines corresponding to the basic pixels (see figure 12, paragraph# 217).

Regarding to claim 2, each of the basic-pixel driving-chips (LED) including a plurality of control devices to individually control operating conditions of the plurality of electro-optical elements (see figure 1, paragraph# 54, 136).

Regarding to claim 3, each of the control devices including a first transistor to control current flowing in the electro-optical element and a second transistor to operate the first transistor in accordance with input signals (see figure 1).

Regarding to claim 4, gate electrode of the second transistor included in each of the control devices being connected to a common line passing through each of the control devices (see figure 1).

Regarding to claim 5, each of the basic-pixel driving-chips (LED) including a plurality of first connection terminals (figure 1) serving as electrical connections to the basic-pixel driving-chip;

the first substrate including a plurality of second connection terminals (81) provided in regions to which the basic-pixel driving-chips are transferred in one-to-one correspondence with the first connection terminals and serving as electrical connections to the lines (see figure 12),

the transferring including accomplishing electrical connection between the basic-pixel driving-chips and the first substrate by carrying out the transferring to bring the

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plurality of first and second connection terminals into contact with each other (see figure 11-12), and

each of the first connection terminals and each of the second connection terminals being allocated to the common line included in the basic-pixel driving-chip and to the lines on the first substrate to be electrically connected to the common line, respectively (see figures 1, 11-12, paragraph# 180+).

Regarding to claim 6, the transferring including forming an adhesive layer (61) on at least one side of the first connection terminals formed in the basic-pixel driving-chips or the second connection terminals formed on the first substrate (60, see figure 9+,).

Regarding to claim 7, the plurality of first connection terminals (81) being spaced from one another by a predetermined distance, and also being arranged in two lines along one direction of the basic-pixel driving-chip (see figure 12, paragraph2# 182+).

Regarding to claim 8, the forming the chip on a second substrate including forming a peeling layer (124/128/166) interposed between the second substrate (127) and the basic-pixel driving-chips (122), the peeling layer having a feature that application of energy causes a phase transformation to weaken the bonding strength to the basic-pixel driving-chips (see figure 22, paragraph# 204+). Noted that, it is inherent that peeling layer have a feature that application of energy causes a phase transformation to weaken the bonding strength to the basic-pixel driving chip so that would be easy to peel from the chips.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (571) 272-1695, or by Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached on (571) 272-1702. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).



Thanh Nguyen
Patent Examiner
Patent Examining Group 2800

TTN